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10/036,331

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Matthew S. Turner

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EXAMINER

NGUYEN, TAM M

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,331

Applicant(s)

TURNER ET AL.

Examiner

Tam M. Nguyen

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 46 is rejected under 35 U.S.C. 102(b) as being anticipated by Crawford et al. (2,596,010).

Crawford discloses a process for separating oil from oil-containing solids (e.g., soybean or cotton). The oil containing solids are contacted with an isohexane solvent to form an extraction mixture which is separated into a solids-containing fraction and an oil-containing solvent fraction. Finally, the oil-containing solvent is then passed into a separation zone under vacuum to form an oil fraction. The isohexane solvent comprises 95 wt. % of methylpentane (either 2-methylpentane or 3-methylpentane) and less than .5 vol. % of aromatic. The contacting step is operated at a temperature of from 80 to 150° F. Crawford also discloses the solvent might also comprise other isoparaffins such as neohexane (2,2-dimethylbutane and 2,3-dimethylbutane). (See col. 2, lines 38-49; col. 3, lines 8-10, 55-62; col. 4, lines 24-45)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 47-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawford et al. (2,596,010).

Crawford discloses a process for separating oil from oil-containing solids (e.g., soybean or cotton). The oil containing solids are contacted with an isohexane solvent to form an extraction mixture which is separated into a solids-containing fraction and an oil-containing solvent fraction. Finally, the oil-containing solvent is then passed into a separation zone under vacuum to form an oil fraction. The isohexane solvent comprises 95 wt. % of methylpentane (either 2-methylpentane or 3-methylpentane) and less than .5 vol. % of aromatic. The contacting

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step is operated at a temperature of from 80 to 150° F. Crawford also discloses the solvent might also comprise other isoparaffins such as neohexane (2,2-dimethylbutane and 2,3-dimethylbutane). It is noted that Crawford does not specifically disclose the wet dew point of the isohexane solvent. However, the Crawford isohexane solvent is similar to the claimed solvent. It would be expected that the Crawford solvent would have the wet dew point as claimed. Crawford does not specifically disclose that the isohexane solvent includes a wet bubble point at 375 mm Hg of at least 98° F. However, the isohexane solvent of Crawford is essentially the same as the claimed isohexane solvent. It would be expected that the isohexane solvent of Crawford would have a wet bubble point as claimed. (See col. 2, lines 38-49; col. 3, lines 8-10, 55-62; col. 4, lines 24-45)

Crawford does not specifically disclose that the solvent comprising greater than 0%, but no more than 15 wt. %, 5 wt. %, or 3 wt. % of 2,2-dimethylbutane and 2,3-dimethylbutane wherein the solvent comprises about 1 wt. % of 2,2-dimethylbutane, does not disclose that the solvent comprises no more than about 10 ppm of benzene, does not disclose that the plant material includes corn germ, and does not disclose the wet dew point as claimed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by using a solvent comprising at least 95 wt. % or 97 wt. % of the isohexane because one of skill in the art would use any high purity solvent comprising at least 85 wt. % of isohexane (methylpentane) including the claimed solvent with the expectation that a high purity isoparaffinic solvent can be effective in the process and an isohexane solvent comprises a tiny amount of n-hexane and 2,2-dimethylbutane would not affect the outcomes of the process.

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Crawford discloses that the vegetable materials including soybean and wheat germ. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by using corn germ because one of skill in the art would use any plant materials that contain oil including corn germ.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by using a solvent comprising the claimed amount of dimethylbutane (neohexane) because Crawford teaches that the isohexane solvent can comprises a small amount of dimethylbutane. It would be expected that the results would be the same or similar when using the solvent does not comprise dimethylbutane or comprises a small amount of dimethylbutane as claimed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by using a isohexane solvent comprising the claimed amount of benzene because Crawford desires to use a solvent which does not comprises aromatics. It would be expected that the results would be the same or similar when using a solvent comprising 0, 5, 10 or 15 ppm of benzene.

Since the modified solvent of Crawford is essentially the same as to the claimed solvent. It would be expected that the Crawford solvent would have the wet dew point as claimed.

Response to Arguments

The argument that the Crawford solvent comprises 3.1 wt.% of cyclopentane, which is 5-carbon hydrocarbon and consequently can comprise no more than about 97 % by weight saturated aliphatic hydrocarbons having 6 carbons is not persuasive. Crawford intends to use a

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solvent comprising essentially of 3-methylpentane and 2-methylpentane. Crawford teaches that other isoparaffins can be present in the solvent which includes neohexane having 6 carbons. Therefore, the solvent of Crawford can comprise up to 100 % of saturated aliphatic hydrocarbons having 6 carbons.

The argument that Crawford does not teach or suggest an isohexane solvent having the claimed wet dew point is not persuasive because of the similarities between the claimed solvent and the solvent of Crawford.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
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TN